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May 29, 1987

Ms. Lynn Rusten
Program Officer
National Academy of Sciences
Committee on International Security & Arms Control
2101 Constitution Avenue, NW
Washington, D.C. 20418

Dear Ms. Rusten:

I appreciate your providing me a copy of the report dealing with the meeting of the United States delegation with a similar delegation from the USSR Academy of Sciences to discuss biological weapons. I was interested to note the various discussions concerning the Sverdlovsk epidemic and, especially, to read the additional information that has been made available by the Russians concerning the outbreak.

Dr. Matthew Meselson has made available to me a copy of his notes from his trip to Russia in August of 1986. I have reviewed his notes and sent him a letter summarizing my comments and raising some additional questions. You may be interested in seeing my response to his report.

I would like to raise several queries concerning you report and also ask whether the slides that you were shown have been made available to you or others so that some of our pathologists experienced in the pathology of human anthrax infections could also review them?

On page 33 in the first paragraph, I note with great interest that it was reported by Dr. Nikiforov, that "many patients developed subjective improvement with the fall of fever, but then died within five to seven hours". I do not recall any previous report associating this clinical course with gastrointestinal anthrax; however, we have observed this finding in patients with inhalation anthrax. The literature does not contain more than a few case descriptions of patients with gastrointestinal anthrax, so possibly this is a clinical finding associated with gastrointestinal anthrax that is being reported for the first time. However, I emphasize that this is not uncommonly seen in patients with inhalation anthrax. The pathological changes involving organs throughout the body, including the brain, suggests septicemia and secondary meningitis.

On page 35 in the third paragraph, it is reported that an individual with swollen arms was "given steroids which had no effect". This is interesting because in the literature it has been reported, that use of steroids has been beneficial in reducing subcutaneous edema in patients that have extensive edema. I wonder where the cutaneous lesion was located to cause edema of both arms.

On page 2 of the appendix, in the second paragraph, multiple cases within the same family are mentioned which would not be unexpected if contaminated meat was the source of infection.

On page 4 of the appendix, in the second paragraph, there is a discussion of "pulmonary anthrax". The reference should really be to inhalation anthrax which is the correct term since the primary pathology does not involve the tissue of the lung but extensively involves the mediastinal tissue. When Dr. Nikiforov indicated that the lungs that he had seen in the cases in Albania showed "hemorragic edema of the lungs", it may be that his comments were misunderstood since the hemorragic edema should involve the mediastinum and not the lung tissue itself.

I note in the third paragraph on page 4 of the appendix, that Dr. Nikiforov felt that anthrax vaccine was not effective. This is an interesting comment since the Russian literature, in which the Russian vaccine is discussed, indicates that it was effective in preventing cases of anthrax. My recollection is that they referred to cutaneous anthrax in their reports on vaccine evaluation.

On page 6 of the appendix, Dr. Nikiforov is stated to have said "he believed patients with dermal lesions did not gain immunity to future infections". I would be very much interested in any information he has concerning this point since we feel that an individual who has had a confirmed case of cutaneous anthrax is immune from subsequently developing a second lesion. Though there have been individuals discussed in the literature who have been reported to have had two cutaneous lesions at separate times; in each instance either one or both of the lesions were not confirmed bacteriologically. In individuals whose serum have been tested following the development of cutaneous anthrax they have shown protective antibodies against the organism.

I will not repeat questions that I raised concerning statements in Professor Meselson's report which are also in your report.

I hope that my comments are of some benefit to you and possibly Dr. Lederberg.

Sincerely,

Philip S. Brachman, M.D.

Enclosure: Copy of Dr. Matthew Meselson's Letter